

Chapter 01: Introduction to Business Analytics

True / False

1. Data analysis includes data description, data visualization, data inference, and the search for relationships in data.

- a. True
- b. False

ANSWER: True

2. A relatively new aspect of business analytics is big data, which typically implies the analysis of the very large data sets that companies currently encounter.

- a. True
- b. False

ANSWER: True

3. Although it is relatively easy to collect data, it can be more challenging to understand what the data mean.

- a. True
- b. False

ANSWER: True

4. When we use simulation models to help make decisions, we do not deal with uncertainty, because we can carry out calculations and avoid performing inferences.

- a. True
- b. False

ANSWER: False

5. We must deal with uncertainty when we make inferences from data and search for relationships in data, or when we use decision trees to help make decisions.

- a. True
- b. False

ANSWER: True

6. Spreadsheet models typically involve inputs, decision variables, and outputs.

- a. True
- b. False

ANSWER: True

7. Spreadsheet modeling is the process of entering the outputs into a spreadsheet and then relating them appropriately, by means of formulas, to obtain the decision variables.

- a. True
- b. False

ANSWER: False

8. A few ways to enhance the readability of a spreadsheet model are to use a clear, logical layout of the overall model, and to use clear headings for different sections of the model and for all inputs, decision variables, and outputs.

- a. True
- b. False

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ANSWER:

True

Multiple Choice

9. The decision-making themes covered in *Business Analytics: Data Analysis and Decision Making* include which of the following?

- a. Optimization techniques
- b. Decision analysis with uncertainty
- c. Structured sensitivity analysis
- d. All of these choices

ANSWER:

d

10. Which statement is not true?

- a. Dealing with uncertainty includes measuring uncertainty.
- b. Dealing with uncertainty includes modeling uncertainty explicitly into the analysis.
- c. Dealing with uncertainty includes eliminating uncertainty by using the normal probability distribution.
- d. Dealing with uncertainty requires a basic understanding of probability.

ANSWER:

c

11. What is not one of the important themes of your *Business Analytics: Data Analysis & Decision Making* text?

- a. Data analysis
- b. Dealing with uncertainty
- c. Decision making
- d. Data mining

ANSWER:

d

12. Data analysis includes

- a. data description.
- b. data inference.
- c. the search for relationships in data.
- d. all of these choices.

ANSWER:

d

13. Which of the following is not one of the “intermediate” features of Excel that the authors expect you to be able to use?

- a. SUMPRODUCT
- b. VLOOKUP
- c. IF
- d. DIFFERENCEPRODUCT

ANSWER:

d

14. Which of the following would not be included under data analysis?

- a. Measuring uncertainty
- b. Data description

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- c. Data inference
- d. Search for relationships

ANSWER:

a

15. The decision making process includes

- a. optimization techniques for problems with no uncertainty.
- b. decision analysis for problems with uncertainty.
- c. sensitivity analysis.
- d. all of these choices.

ANSWER:

d

16. Which tool is an Excel add-in for performing what-if analyses?

- a. PrecisionTree
- b. TopRank
- c. Solver
- d. @Risk

ANSWER:

b

17. Which of the following statements is true?

- a. Three important themes run through the book: data analysis, decision making, and uncertainty.
- b. Data analysis includes data description, data inference, and the searching for relationships in data.
- c. Decision making includes optimization techniques for problems with no uncertainty, decision analysis for problems with uncertainty, and structured sensitivity analysis.
- d. All of these statements are true.

ANSWER:

d

18. Which of the following statements is false?

- a. A two-way table allows you to see how a single output cell varies as you vary two input cells.
- b. The SUMPRODUCT function takes two range arguments, which must be exactly the same size and shape, and it sums the products of the corresponding values in these two ranges.
- c. The purpose of the Auditing Toolbar is to solve one equation with one unknown.
- d. The NPV function takes two arguments, the discount rate and a stream of cash flows.

ANSWER:

c

19. Which of the following statements are false?

- a. Decision-making includes *optimization techniques* for problems with no uncertainty, *decision analysis* for problems with uncertainty, and structured *sensitivity analysis*.
- b. The three themes of this book are data analysis, decision making, and uncertainty.
- c. Dealing with uncertainty includes *measuring* uncertainty and *modeling* uncertainty explicitly.
- d. None of these statements are false.

ANSWER:

d

20. Which of the following is true?

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- a. When entering an expression of text into an Excel function, it must be enclosed in double quotes.
- b. A spreadsheet model should always include input numbers in formulas rather than cell references.
- c. If we enter A1:A5 as part of an Excel function, this refers to cells A2, A3, and A4, the cells that are between A1 and A5, exclusive.
- d. All of these statements are true.

ANSWER:

a

21. Which of the following Excel® functions can be used for finding a particular value based on a comparison?

- a. IF
- b. SUMPRODUCT
- c. VLOOKUP
- d. NPV

ANSWER:

c

22. In Excel, the model outputs are

- a. the numeric values that result from combinations of inputs and decision variables through the use of logical formulas.
- b. useful for making formulas more readable.
- c. the variables a decision maker has control over to obtain the best solutions.
- d. useful for finding a particular value based on a comparison.

ANSWER:

a

23. Which is an Excel add-in for simulation?

- a. PrecisionTree
- b. TopRank
- c. Solver
- d. @Risk

ANSWER:

d

24. What is the main difference between traditional quantitative methods and the new field of business analytics?

- a. Business analytics uses smaller datasets.
- b. Business analytics focuses more on descriptive statistics.
- c. Business analytics utilizes big data and technology.
- d. Business analytics relies solely on optimization models.

ANSWER:

c

25. Which Excel tool allows you to fit different types of curves through data points in a scatterplot?

- a. Data Table
- b. Goal Seek
- c. Trendline
- d. Solver

ANSWER:

c

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26. Which Excel chart type is useful for displaying how an output metric changes over time?

- a. Column chart
- b. Line chart
- c. Pie chart
- d. Histogram

ANSWER:

b

27. Which Excel function calculates the present value of a series of future cash flows?

- a. DATA
- b. DATE
- c. NPV
- d. PV

ANSWER:

c

28. What term refers to the idea that money received today is more valuable than money received in the future?

- a. Inflation
- b. Interest
- c. Time value of money
- d. Discount rate

ANSWER:

c

29. In Excel, which key can you press to easily toggle between relative and absolute cell references when creating a formula?

- a. F1
- b. F2
- c. F3
- d. F4

ANSWER:

d

30. Which Excel tool allows you to substitute different input values and immediately see the impact on outputs?

- a. Scenario Manager
- b. Data table
- c. Camera
- d. Goal Seek

ANSWER:

b